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| 09/664,085      | 09/18/2000  | John E. Bennett      | Q858-E              | 3902             |

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11/12/2003

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| EXAMINER |
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HUTTON JR, WILLIAM D

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| ART UNIT | PAPER NUMBER |
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2178

DATE MAILED: 11/12/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

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## Office Action Summary

Application No.

09/664,085

Applicant(s)

BENNETT ET AL.

Examiner

Doug Hutton

Art Unit

2178

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-54 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-39 is/are allowed.
- 6) ☒ Claim(s) 40-42, 44, 46, 48-50 and 52 is/are rejected.
- 7) ☒ Claim(s) 43, 45, 47, 51, 53 and 54 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Applicant's Response***

In Paper No. 12, Applicant amended Claims 18, 26, 29, 30, 38 and 39, added new Claims 40-54, and argued against all objections and rejections previously set forth in Paper No. 11.

All previous objections and rejections are withdrawn.

***Claim Objections***

Claim 42 is objected to because of the following informalities:

- the phrase "finger hold element" is objected to because this terminology is not used in the specification; Applicant should amend this phrase to clearly identify the element to which is referred; for purposes of examination, Examiner will assume that the "finger hold element" is anything that may be held with the user's fingers (a tool, a screw, etc.).

Claims 44, 45 and 48 are objected to under 37 CFR 1.75(c) as being in improper form because the wording of the preambles is improper. See MPEP § 608.01(n). The preamble for Claim 44 should be amended to — The hinge as in any one of Claims 40 through 43 —. Whereas, the preamble for Claim 45 should be amended to — The hinge as in Claims 42 or 43 — because a "finger hold element" is not previously

mentioned in Claims 40 and 41. Finally, the preamble for Claim 48 should be amended to — The hinge as in Claims 46 or 47 —.

Claim 46 is objected to because of the following informalities:

- the phrase “on one said plate” in Line 3 should be amended to — on one of said plates — so that the limitation reads more clearly; this same problem occurs in Line 8.

Claims 50-55 are objected to because of the following informalities:

- the claims are misnumbered; “Claims 50-55” should be renumbered to Claims 49-54, respectively.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 40-42, 44, 46, 48-50 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art (Admission), in view of Kilbey, U.S. Patent No. 5,814,000, and further in view of Bloedau, U.S. Patent No. 5,938,629.

*Claim 40:*

Admission discloses a hinge for an orthopedic splint comprising:

- upper and lower plates connected for pivotal movement about a pivot axis (see Applicant's Specification – Page 1, Lines 16-19; all knee braces having upper and lower plates connected by a hinge inherently are “connected for pivotal movement about a pivot axis” in that every hinge connects two members and has a “pivotal axis” about which those members rotate);
- a pair of wheels rotatable about said pivot axis including stop means for limiting said pivotal movement to a selected pivotal arc (see Applicant's Specification – Page 1, Line 30 through Page 2, Line 7); and
- a detent element supported on one said plate and displaceable into and out of an engaged condition with both said wheels for locking said wheels against rotation relative to said one said plate (see Applicant's Specification – Page 1, Line 30 through Page 2, Line 7 — the detent is supported on the upper plate (Page 2, Line 7); the detent is displaceable into and out of an engaged condition with both said wheels for locking said wheels against rotation relative to said one said plate (Page 2, Lines 4-7)).

Admission fails to disclose a spring normally urging said detent into said engaged condition. However, it is well-known in the art to include a spring (74, Figure 4) normally urging a detent (70) into engagement with plates, as demonstrated by Kilbey, U.S. Patent No. 5,814,000.

Admission, in view of Kilbey, fails to disclose a detent element being shaped, arranged, and configured to substantially prevent retraction of said detent element from said engaged condition with a person's unaided hand.

Bloedau teaches a brace, comprising:

- a pair of wheels (44 and 44A, Figure 3) rotatable about a pivot axis (see Figure 5A) including stop means for limiting said pivotal movement to a selected pivotal arc (see Figures 5A, 5B and 5C); and
- a detent element (33, Figure 3) supported on a plate (22) and displaceable into and out of an engaged condition with both said wheels (see Figures 4A and 5A) for locking said wheels against rotation relative to said one said plate (Column 1, Lines 35-40), said detent element being shaped, arranged, and configured to substantially prevent retraction of said detent element from said engaged condition with a person's unaided hand (Column 2, Line 55 through Column 3, Line 10 – the detent element cannot be moved with a person's unaided hand).

Bloedau does not explicitly state why the detent element has this arrangement; however, it appears that this arrangement prevents any unwanted adjustment of the hinge.

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the admitted prior art, in view of Kilbey, to include a detent element being shaped, arranged, and configured to substantially prevent retraction of said detent element from said engaged condition with a person's unaided hand, for the purpose of preventing any unwanted adjustment of the hinge, as taught by Bloedau.

*Claim 41:*

Admission discloses a detent element that is linearly displaceable into and out of said engaged condition (see Applicant's Specification – Page 1, Line 23 through Page 2, Line 7).

Moreover, a detent element that is linearly displaceable into and out of said engaged condition was well-known by one of ordinary skill in the art at the time the invention was made, as demonstrated in Kilbey (see Figures 10-12) and Bloedau (see Figures 4A and 5A).

*Claim 42:*

Admission, in view of Kilbey, fails to disclose a finger hold element.

Bloedau teaches a finger hold element removably engageable with said detent element for assisting a therapist in disengaging said detent element, said finger hold element being removable for discouraging actuation of said detent element by a patient fitted with said orthopedic splint (Column 2, Line 55 through Column 3, Line 10 – the allen wrench is the “finger hold element”).

Bloedau does not explicitly state why the finger hold element has this arrangement; however, it appears that this arrangement prevents any unwanted adjustment of the hinge.

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the admitted prior art, in view of Kilbey, to include a finger hold element removably engageable with said detent element for assisting a therapist in disengaging said detent element, said finger hold element being removable for discouraging actuation of said detent element by a patient fitted with said orthopedic splint, for the purpose of preventing any unwanted adjustment of the hinge, as taught by Bloedau.

*Claim 44:*

Admission, in view of Kilbey, fails to disclose a detent element that is recessed relative to a top surface on said one said plate.

Bloedau teaches a detent element that is recessed relative to a top surface on said one said plate such as to substantially prevent retraction of said detent element



from said engaged condition with a person's unaided hand (see Figures 2, 3, 4A and 5A).

Bloedau does not explicitly state why the detent element has this arrangement; however, it appears that this arrangement prevents any unwanted adjustment of the hinge.

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the admitted prior art, in view of Kilbey, to include a detent element that is recessed relative to a top surface on said one said plate such as to substantially prevent retraction of said detent element from said engaged condition with a person's unaided hand, for the purpose of preventing any unwanted adjustment of the hinge, as taught by Bloedau.

*Claim 46:*

Admission discloses a hinge for an orthopedic splint comprising:

- an upper plate and a lower plate connected for pivotal movement (see Applicant's Specification – Page 1, Lines 16-19; all knee braces having upper and lower plates connected by a hinge inherently are "connected for pivotal movement" in that every hinge connects two members and has an axis about which those members rotate);
- a detent element supported on one of said plates and displaceable into and out of an engaged condition thereby to lock the two plates against pivotal movement in a selected angular relationship relative to each other (see Applicant's

Specification – Page 1, Lines 23-30 — the detent is supported on the upper plate (Page 1, Line 24); the detent is displaceable into and out of an engaged condition for locking said plates against pivotal movement in a selected angular relationship (Page 1, Lines 24-30)); and

- a pair of wheels rotatable about said pivot axis including stop means for limiting said pivotal movement to a selected pivotal arc (see Applicant's Specification – Page 1, Line 30 through Page 2, Line 7).

Admission fails to disclose a spring normally urging said detent into said engagement. However, it is well-known in the art to include a spring (74, Figure 4) normally urging a detent (70) into engagement with plates, as demonstrated by Kilbey, U.S. Patent No. 5,814,000.

Admission, in view of Kilbey, fails to disclose:

- a detent element being shaped, arranged, and configured relative to a top surface on one of said plates such as to substantially prevent retraction of said detent element from said engaged condition with a person's unaided hand; and
- a finger hold element removably engageable with said detent element for assisting a therapist in disengaging said detent element.

Bloedau teaches a brace, comprising:

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- an upper plate and a lower plate (22, Figure 3) connected for pivotal movement; and
- a detent element (33, Figure 3) supported on a plate (22) and displaceable into and out of an engaged condition (see Figures 4A and 5A) for locking said plates against pivotal movement in a selected angular relationship relative to each other (see Figures 4A and 5A; rings 44 and 44A can be adjusted to lock the plates against pivotal movement in a selected angle), said detent element being shaped, arranged, and configured relative to a top surface on one of said plates such as to substantially prevent retraction of said detent element from said engaged condition with a person's unaided hand (Column 2, Line 55 through Column 3, Line 10 – the detent element cannot be moved with a person's unaided hand); and
- a finger hold element removably engageable with said detent element for assisting a therapist in disengaging said detent element, said finger hold element being removable for discouraging actuation of said detent element by a patient fitted with said orthopedic splint (Column 2, Line 55 through Column 3, Line 10 – the allen wrench is the “finger hold element”).

Bloedau does not explicitly state why the detent element and the finger hold element have this arrangement; however, it appears that this arrangement prevents any unwanted adjustment of the hinge.

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the admitted prior art, in view of Kilbey, to include:

- a detent element being shaped, arranged, and configured to substantially prevent retraction of said detent element from said engaged condition with a person's unaided hand; and
- a finger hold element removably engageable with said detent element for assisting a therapist in disengaging said detent element, said finger hold element being removable for discouraging actuation of said detent element by a patient fitted with said orthopedic splint,

for the purpose of preventing any unwanted adjustment of the hinge, as taught by Bloedau.

*Claim 48:*

Admission discloses a detent element that is linearly displaceable into and out of said engaged condition (see Applicant's Specification – Page 1, Line 23 through Page 2, Line 7).

Moreover, a detent element that is linearly displaceable into and out of said engaged condition was well-known by one of ordinary skill in the art at the time the invention was made, as demonstrated in Kilbey (see Figures 10-12) and Bloedau (see Figures 4A and 5A).

*Claim 49:*

Admission discloses a hinge for an orthopedic splint comprising:

- an upper plate and a lower plate connected for pivotal movement (see Applicant's Specification – Page 1, Lines 16-19);
- a pair of wheels turning concentrically with said pivotal movement of the plates, (see Applicant's Specification – Page 2, Lines 1-9); and
- a detent supported on said upper plate, said detent movable into and out of engagement with a wheel edge on each of said wheels for locking said wheels against rotation relative to said upper plate (see Applicant's Specification – Page 1, Lines 23-30);
- a stop on each of said wheels operative for limiting pivotal movement of said lower plate relative to said upper plate in one direction of movement (see Applicant's Specification – Page 2, Lines 1-9).

Admission fails to disclose a spring normally urging said detent into said engaged condition. However, it is well-known in the art to include a spring (74, Figure 4) normally urging a detent (70) into engagement with plates, as demonstrated by Kilbey, U.S. Patent No. 5,814,000.

Admission, in view of Kilbey, fails to disclose:

- a finger hold element attached to said detent element for assisting a therapist in disengaging said detent element against the urging of said spring; and

- a stop pin on the lower plate that is disposed for movement between the two stops.

Bloedau teaches a hinge for an orthopedic splint comprising:

- a pair of wheels (44, 44A; Figure 3) turning concentrically with pivotal movement of an upper plate and a lower plate (see Figure 5A), each of said wheels having a wheel edge (46, Figures 5B and 5C) engageable by a detent (32, Figure 4A) for locking the wheels relative to said upper plate;
- a stop (49B, Figure 4B; and 49A, Figure 4C) on each of said wheels operative for limiting pivotal movement of said lower plate relative to said upper plate; and
- a stop pin (48, Figure 3) on said lower plate disposed between the stops on said wheels (see Figure 5A) such that the range of pivotal movement between the upper and lower plates is determined by the angular spacing between the stops when said detent is engaged for locking said wheels against rotation relative to said upper plate and said angular spacing is adjustable in a disengaged condition of said detent (Column 1, Lines 35-40),

for the purpose of adjusting the position and the amount of pivotal movement between upper and lower plates.

Bloedau also teaches a finger hold element removably engageable with said detent element for assisting a therapist in disengaging said detent element (Column 2, Line 55 through Column 3, Line 10 – the allen wrench is the “finger hold element”).

Bloedau does not explicitly state why the finger hold element has this arrangement; however, it appears that this arrangement prevents any unwanted adjustment of the hinge.

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the admitted prior art to include:

- a stop pin on said lower plate being disposed between the two stops such that the range of pivotal movement between the plates may be set by the angular spacing between the two stops when said detent is engaged for locking said wheels against rotation relative to said upper plate, for the purpose of adjusting the position and the amount of pivotal movement between upper and lower plates; and
- a finger hold element removably engageable with said detent element for assisting a therapist in disengaging said detent element, for the purpose of preventing any unwanted adjustment of the hinge;

as taught by Bloedau.

*Claim 50:*

Admission, in view of Kilbey, fails to disclose a finger hold element.

Bloedau teaches a finger hold element that is disengageable from said detent (Column 2, Line 55 through Column 3, Line 10 – the allen wrench is the “finger hold element”).

Bloedau does not explicitly state why the finger hold element has this arrangement; however, it appears that this arrangement prevents any unwanted adjustment of the hinge.

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the admitted prior art, in view of Kilbey, to include a finger hold element that is disengageable with said detent element, for the purpose of preventing any unwanted adjustment of the hinge, as taught by Bloedau.

*Claim 52:*

Admission, in view of Kilbey, fails to disclose a detent element that is arranged and configured to substantially prevent retraction of said detent element from said engaged condition with a person's unaided hand.

Bloedau teaches a brace, comprising:

- a detent element (33, Figure 3) that is arranged and configured to substantially prevent retraction of said detent element from said engaged condition with a person's unaided hand (Column 2, Line 55 through Column 3, Line 10 – the detent element cannot be moved with a person's unaided hand).

Bloedau does not explicitly state why the detent element has this arrangement; however, it appears that this arrangement prevents any unwanted adjustment of the hinge.



Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the admitted prior art, in view of Kilbey, to include a detent element that is arranged and configured to substantially prevent retraction of said detent element from said engaged condition with a person's unaided hand, for the purpose of preventing any unwanted adjustment of the hinge, as taught by Bloedau.

***Allowable Subject Matter***

Claims 1-39 are allowed.

The following is an examiner's statement of reasons for allowance:

*Claims 1-17, 22-25 and 37:*

These claims are allowable for the reasons indicated by Examiner in Paper No. 11.

*Claims 18-21, 26-28, 31-36, 38 and 39:*

These claims are allowable, as argued by Applicant in Paper No. 12.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Claims 43, 45, 47, 51, 53 and 54 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

*Claims 43, 45, 47, 51, 53 and 54:*

The prior art fails to disclose or suggest a hinge for an orthopedic splint, comprising every element specified in each of these claims.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Doug Hutton whose telephone number is (703) 305-1701. The examiner can normally be reached on Monday-Friday from 8:00 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight, can be reached at (703) 308-1159. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-7687.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-2168.

WDH  
November 3, 2003

  
**ANTHONY KNIGHT**  
**SUPERVISORY PATENT EXAMINER**  
**TECH CENTER 3600**